

MEDICAL MNEMONICS

By Rishad Thahir

RISH ACADEMY

Rish Academy

Sri Lanka

www.rishacademy.com

Copyright © 2020 by Rish Academy

As new scientific information becomes available through basic and clinical research, recommended treatments and drug therapies undergo changes. The author and publisher have done everything possible to make this book accurate, up to date, and in accord with accepted standards at the time of publication. The author is not responsible for errors or omissions or for consequences from application of the book, and make no warranty, expressed or implied, in regard to the contents of the book. Any practice described in this book should be applied by the reader in accordance with professional standards of care used in regard to the unique circumstances that may apply in each situation. The reader is advised always to check product information for changes and new information clinical clues and pathophysiology of the disease before making the diagnosis.

Dedication

To my parents and siblings, thank you for your love and support.

- **Anatomy**
- **Biochemistry**
- **Cardiology and Respiratory System**
- **Endocrinology**
- **Genetics**
- **Hematology**
- **Neurology, Hepatobiliary & Gastrointestinal System**
- **Pharmacology**
- **Rheumatology**
- **Surgery**
- **Miscellaneous**

ANATOMY MNEMONICS

Structures in cavernous sinus and their positions (**O TOM CAT**)

Oculomotor nerve

Trochlear nerve

Ophthalmic branch of trigeminal nerve

Maxillary branch of trigeminal nerve

Carotid artery (internal)

Abducens nerve

Trochlear nerve



Anatomical layers of the scalp (SCALP)

Skin

Connective tissue

Aponeurosis (galea)

Loose connective tissue

Periosteum



Bones in the medial wall of the orbit (My Little Eye Sits in the orbit)

Maxilla (frontal process)

Lacrimal

Ethmoid

Sphenoid (body)



Bones in the nasal septum (My Very Fine Nasal SEPtum)

Maxilla

Vomer

Frontal

Nasal

Sphenoid

Ethmoid

Palatine



Nerves passing through the superior orbital fissure (Live Frankly To See Absolutely No Insult)

Lacrima nerve

Frontal nerve

Trochlear nerve

Superior division of oculomotor nerve

Abducens nerve

Nasociliary nerve

Inferior division of oculomotor nerve



RISHACADEMY

educate yourself to empower yourself

www.rishacademy.com

Where trigeminal nerve branches exit the skull (**S**tanding **R**oom **O**nly)

Superior orbital fissure – V1

Foreman **R**otundum – V2

Foreman **O**vale – V3



Branches of the facial nerve

(**T**en **Z**ulus **B**ought **M**y **C**at)

Temporal

Zygomatic

Buccal

Mandibular

Cervical



Brachial plexus (Randy Travis Drinks Cold Beers)

Roots

Trunks

Divisions

Cords

Branches



Attachments of pectoralis major, teres major and latissimus dorsi to the bicipital groove (**a lady between two majors**)

Pectoralis **major** attaches laterally

Teres **major** attaches medially

Latissimus dorsi ('lady') attaches to the floor in **between**



Muscles involved in elbow flexion (3 B's Bend the elbow)

Biceps

Brachialis

Brachioradialis



Hand interossei muscles (PAD DAB)

Palmar interossei – **AD**duct

Dorsal interossei – **AB**duct



Wrist bones (She Looks Too Pretty, Try To Catch Her)

Scaphoid

Lunate

Triquetrum

Pisiform

Trapezium

Trapezoid

Capitate

Hamate



Median nerve supply of hand muscles (**ulnar nerve** supplies all intrinsic muscles of hands except the **LOAF** muscles)

Lateral two lumbricals

Opponens pollicis

Abductor pollicis brevis

Flexor pollicis brevis



RISHACADEMY

educate yourself to empower yourself

www.rishacademy.com

Level of diaphragmatic apertures

Vena cava = 8 letters = T8

Oesophagus = 10 letters = T10

Aortic hiatus = 12 letters = T12



Relations of femoral nerve, artery and vein (from lateral to medial **NAVY**)

Nerve

Artery

Vein

Ymphatics (femoral canal)



Borders of the femoral triangle (shaped like a **SAIL**)

Sartorius

Adductor longus

Inguinal **L**igament



RISHACADEMY

educate yourself to empower yourself

www.rishacademy.com

Contents of the tarsal tunnel (from anterior to posterior Tom, Dick And Very Nervous Harry)

Tibialis posterior
flexor **D**igitorum longus
Artery (posterior tibial)
Vein (posterior tibial)
Nerve (tibial)
flexor **H**allucis longus



Layers of the scrotum (Some Damn Englishmen Called It The Testis)

Skin

Dartos

External spermatic fascia

Cremaster muscle

Internal spermatic fascia

Tunica vaginalis

Testis



BIOCHEMISTRY

MNEMONICS

Niacin deficiency (4 D's)

- D** - Diarrhoea
- D** - Dermatitis
- D** - Dementia
- D** - Death (if untreated)



Citric acid cycle components (**O**h! **C**an I **K**ee**S**ome **S**uccinate **F**or **M**yself?)

O	-	O xaloacetate
C	-	C itrate
I	-	I socitrate
K	-	K etoglutanate
S	-	S uccinyl CoA
S	-	S uccinate
F	-	F umarate
M	-	M alate



Branched chain amino acids (**LEVIS**)

LE - **LE**ucine

V - **V**aline

IS - **IS**oleucine



Causes of metabolic acidosis with raised anion gap (**MUDPILES**)

- M** - **M**ethanol
- U** - **U**raemia
- D** - **D**iabetic ketoacidosis (and alcoholic/starvation ketoacidosis)
- P** - **P**ropylene glycol
- I** - **I**soniazid
- L** - **L**actate
- E** - **E**thylene glycol
- S** - **S**alicylates



Purines (**G**uardian **A**ngels are **P**ure with
two wings)

Guanine and
Adenine are **P**urines
with **two rings**



RISHACADEMY

educate yourself to empower yourself

www.rishacademy.com

CARDIOLOGY & RESPIRATORY SYSTEM MNEMONICS

Complications of myocardial infarction

(DARTH VADER)

- D** - **D**eath
- A** - **A**rrhythmia
- R** - **R**upture (free ventricular wall/ ventricular septum/ papillary muscles)
- T** - **T**amponade
- H** - **H**ear failure (acute or chronic)
- V** - **V**alve disease
- A** - **A**neurysm of ventricle
- D** - **D**ressler's syndrome
- E** - **E**thromboEmbolism (mural thrombus)
- R** - **R**ecurrence/ mitral Regurgitation



Beck's triad of acute cardiac tamponade (3 D's)

- D** - **D**istant heart sounds
- D** - **D**ecreased arterial BP
- D** - **D**istended neck veins



Causes of upper zone pulmonary fibrosis (**A TEA SHOP**)

- A** - **B**PA
- T** - **T**B
- E** - **E**xtrinsic allergic alveolitis
- A** - **A**nkylosing Spondylitis
- S** - **S**arcoidosis
- H** - **H**istiocytosis
- O** - **O**ccupational (silicosis, berylliosis)
- P** - **P**neumoconiosis (coal-worker's)



Features of a life-threatening asthma attack (**A CHEST**)

- A** - **A**rrhythmia/ Altered conscious level
- C** - **C**yanosis, PaCO₂ normal
- H** - **H**ypotension, Hypoxia (PaO₂<8kPa, **S**pO₂ <92%)
- E** - **E**xhaustion
- S** - **S**ilent chest
- T** - **T**hreatening PEF < 33% best or predicted (in those >5yrs old)



ENDOCRINOLOGY

MNEMONICS

Pheochromocytoma (rule of **10's**)

10% extra-abdominal

10% malignant

10% bilateral

10% in children

BUT 30% genetic/syndromic!



Insulinoma (rule of 10's)

- 10% are part of MEN1 syndrome
- 10% are multiple
- 10% are malignant
- 10% contain ectopic pancreatic tissue



Symptoms of hyperthyroidism (SWEATING)

Sweating

Weight loss

Emotional lability

Appetite increased

Tremor/ Tachycardia

Intolerance of heat/ Irregular menstruation/

Irritability

Nervousness

Goitre and GI problems (diarrhoea)



Symptoms of hypothyroidism – tends to occur in middle aged women (**MOM'S SO TIRED**)

Memory loss

Obesity

Malar flush/ Menorrhagia

Slowness (mentally and physically)

Skin and hair dryness

Onset gradual

Tiredness

Intolerance to cold

Raised BP

Energy levels fall

Depression/ Delayed relaxation of reflexes



Causes of adrenal insufficiency (**ADDISON**)

Autoimmune (Addison's disease)

Degenerative (amyloidosis)

Drugs (e.g. ketoconazole)

Infections (e.g. TB, HIV)

Secondary (hypopituitarism)

Others (adrenal bleeding)

Neoplasia



GENETICS

MNEMONICS

Features of Marfan's syndrome (**MARFANS**)

- M** - **M**itral valve prolapse
- A** - **A**ortic dissection/ **A**ortic aneurysm
- R** - **R**egurgitant aortic valve / **R**etinal detachment
- F** - **F**ibrillin-1 mutation
- A** - **A**rm span > height / **A**rachnodactyly
- N** - **N**ear-sighted / **N**asal voice (high-arched palate)
- S** - **S**coliosis / **S**ubluxated lens / pectus excavatum



Features of Fragile X syndrome (Rule of **M**'s)

- M** - **M**ale
- M** - **M**acroorchidism
- M** - **M**ental retardation
- M** - **M**axillary excess (long face)
- M** - **M**uscle tone decrease
- M** - **M**others (females) are obligatory carriers
- M** - **M**ovements stereotyped
- M** - **M**utation in FMR1 gene
- M** - **M**ultiple CGG repeats



Features of DiGeorge syndrome (**CATCH 22**)

- C** - Cardiac abnormalities
- A** - Abnormal facies
- T** - Thymic hypoplasia/aplasia
- C** - Cleft palate
- H** - Hypocalcaemia
- 22** - 22q11 deletion



Features of Tay Sachs disease (**TAY SACHS**)

- T** - Testing recommended
- A** - Autosomal recessive/ Amaurosis
- Y** - Young death (<4years old)
- S** - Spot in macula
- A** - Ashkenazi Jews
- C** - CNS degeneration
- H** - Hexoaminidase A deficiency/ HEA gene mutation
- S** - Startle easily/ (lysosomal) Storage disorder/ Sphingolipidosis



Adult Polycystic Kidney disease

ADult polycystic kidney syndrome
is **A**utosomal **D**ominant

‘Polycystic kidney’ = 16 letters, in
85% of cases mutation for APKD is
in PKD1 on chromosome 16



Prader-Willi and Angelman syndrome

Paternal 15q deletion gives
Prader-Willi syndrome

Maternal 15q deletion gives
angelMan syndrome



HEMATOLOGY

MNEMONICS

Folate deficiency causes (A FOLIC DROP)

Alcoholism

Folic acid antagonists

OCP

Low dietary intake

Infection (giardiasis)

Coeliac disease

Dilantin (phenytoin)

Relative folate deficiency

Old

Pregnancy



Causes of thrombocytopenia (**PLATELETS**)

Platelet disorders (DIC, TTP, ITP)

Leukaemia

Anaemia

Trauma

Enlarged spleen

Liver disease

Ethanol

**Toxins e.g. heparin, aspirin,
chemotherapy, benzene**

Sepsis



RISHACADEMY

educate yourself to empower yourself

www.rishacademy.com

**NEUROLOGY,
HEPATOBIILIARY &
GASTROINTESTINAL
SYSTEM
MNEMONICS**

Causes of Vomiting (**VOMITING**)

- V** - Vestibular/ Vagal reflex (pain)
- O** - Opiates
- M** - Migraine/ Metabolic e.g. DKA
- I** - Infection
- T** - Toxicity (cytotoxic, digoxin)
- I** - Increased ICP/ Ingested alcohol
- N** - Neurogenic
- G** - GI/ Gestation



Cerebellar signs (**DANISH**)

- D** - **Dysdiadochokinesia/**
Dysmetria
- A** - **Ataxia**
- N** - **Nystagmus (horizontal)**
- I** - **Intention tremor**
- S** - **Slurred speech**
- H** - **Hypotonia**



Causes of Pinpoint pupils

Pinpoint Pupils are
caused by opioids and
Pontine Pathology



Diagnostic criteria of Neurofibromatosis Type 1 (**CAFÉ SPOT**)

- C** - Café au lait spots
- A** - Axillary + inguinal freckling
- F** - Fibromas
- E** - Eye: Lisch nodules
- S** - Sphenoid dysplasia
- P** - Positive family history
- O** - Optic Tumour (glioma)



Features of normal pressure hydrocephalus (**Wet, Wobbly, Wacky**)

- Wet** - urinary incontinence
- Wobbly** - ataxic gait
- Wacky** - dementia



Signs of chronic liver disease (ABCDEFGHIJ)

- A - Asterixis, Ascites, Ankle oedema, Atrophy of testicles
- B - Bruising
- C - Clubbing/ Colour change of nails (leuconychia)
- D - Dupuytren's contracture
- E - Encephalopathy / palmar Erythema
- F - Foetor hepaticus
- G - Gynaecomastia
- H - Hepatomegaly
- I - Increase size of parotids
- J - Jaundice



Complications of hereditary haemochromatosis (HaemoChromatosis Can Cause Deposits Anywhere)

- H - Hypogonadism
- C - Cancer (hepatocellular)
- C - Cirrhosis
- C - Cardiomyopathy
- D - Diabetes mellitus
- A - Arthropathy



PHARMACOLOGY

MNEMONICS

ACE inhibitor side effects (**CAPTOPRIL**)

- C** - **C**ough
- A** - **A**ngioneurotic oedema
- P** - **P**roteinuria
- T** - **T**aste disturbance/ Teratogenic in 1st trimester
- O** - **O**ther (fatigue, headache)
- P** - **P**otassium increased
- R** - **R**enal impairment
- I** - **I**tch
- L** - **L**ow BP (1st dose)



Beneficial effects of inhibition of prostaglandin synthesis i.e. paracetamol and NSAIDs (**5 A's**)

- A** - Analgesia
- A** - Antipyretic
- A** - Anti-inflammatory
- A** - Antithrombotic
- A** - Arteriosus (NSAIDs for closure of patent ductus arteriosus)



Side effects of systemic corticosteroids (**CORTICOSTEROIDS**)

C	-	C ushing's syndrome
O	-	O steoporosis
R	-	R etardation of growth
T	-	T hin skin, easy bruising
I	-	I mmunosuppression
C	-	C ataracts and glaucoma
O	-	O edema
S	-	S uppression of HPA axis
T	-	T eratogenic
E	-	E mootional disturbance
R	-	R ise in BP
O	-	O besity (truncal)
I	-	I ncreased hair growth (hirsutism)
D	-	D iabetes mellitus
S	-	S triae



Drugs that potentiate warfarin (O DEVICES)

- O** - Omeprazole
- D** - Disulfiram
- E** - Erythromycin
- V** - Valproate
- I** - Isoniazid
- C** - Ciprofloxacin and Cimetidine
- E** - Ethanol (acutely)
- S** - Sulphonamides



Drugs that decrease the effectiveness of warfarin (**PC BRAS**)

- P** - **P**henytoin
- C** - **C**arbamazepine
- B** - **B**arbiturates
- R** - **R**ifampicin
- A** - **A**lcohol (chronic use)
- S** - **S**ulphonylureas



Side effects of sodium valproate (**VALPROATE**)

- V** - Vomiting
- A** - Alopecia
- L** - Liver toxicity
- P** - Pancreatitis/ Pancytopenia
- R** - Retention of fats (weight gain)
- O** - Redema (peripheral)
- A** - Anorexia
- T** - Tremor
- E** - Enzyme inhibitor



RHEUMATOLOGY MNEMONICS

Shared features of limited and systemic scleroderma (CREST)

Calcinosis

Raynaud's phenomenon

Esophageal dysmotility

Sclerodactyly

Telangiectasia



Types of psoriatic arthritis (**DRAMA**)

Distal interphalangeal

Rheumatoid-like

Asymmetrical oligoarticular/
pauciarticular

Mutilans

Ankylosing-spondylitis-like



Sarcoid systemic features (**FILLED BAGEL**)

Facial nerve palsy

Infiltrations of lung parenchyma/

Pulmonary Insufficiency

Lymphadenopathy (hilar)

Liver + spleen enlargement

Elevated Ace and Ca^{2+}

Dilated cardiomyopathy

Bone cysts

Arthralgia

Granulomata of skin

Erythema nodosum

Lupus pernio



SURGERY

MNEMONICS

Causes of abdominal distension (**6 F's**)

F - **Fat**

F - **Fluid**

F - **Flatus**

F - **Faeces**

F - **Foetus**

F - **Fulminant mass**



Abdominal causes of clubbing (4 C's)

- C** - Coeliac disease
- C** - Cirrhosis
- C** - Crohn's
- C** - ulcerative Colitis



Meckel's diverticulum (**Rule of 2's**)

- 2** - **2%** of population
- 2** - **2x** commoner in males
- 2** - **2feet** proximal to ileocaecal valve
- 2** - **2inches** in length
- 2** - **2types** of common ectopic tissue (gastric and pancreatic)



Lump examination (**3S's, 3C's, 3T's, 1F**)

S	-	Site
S	-	Size
S	-	Shape
C	-	Contour
C	-	Colour
C	-	Consistency
T	-	Tenderness
T	-	Tethering
T	-	Transillumination
F	-	Fluctuance



Causes of Pancreatitis (**GET SMASHED**)

- G** - **G**allstones
- E** - **E**thanol
- T** - **T**rauma
- S** - **S**teroids
- M** - **M**umps
- A** - **A**utoimmune diseases e.g. SLE
- S** - **S**corpion venom
- H** - **H**ypothermia, **H**ypercalcaemia,
Hyperlipidaemia
- E** - **E**RPC, **E**mboli
- D** - **D**rugs (e.g. thiazide and loop
diuretics, azathioprine)



Components of Glasgow score for pancreatitis (**PANCREAS**)

- P** - **P**aO₂ (<8kPa)
- A** - **A**ge (>55)
- N** - **N**eutrophilia (WCC > 15 x 10⁹/L)
- C** - **C**a²⁺ (<2mmol/L)
- R** - **R**enal function (urea >16mmol/L)
- E** - **E**nzymes (LDH >600 iu/L or AST >200 iu/L)
- A** - **A**lbumin (<32g/L)
- S** - **S**ugar (blood glucose >10mmol/L)



MISCELLANEOUS

Macrocytic anemia causes : **ABCDEF**

Alcohol + liver disease

B₁₂ deficiency

Compensatory reticulocytosis (blood loss and hemolysis)

Drug (cytotoxic and AZT)/ Dysplasia (marrow problems)

Endocrine (hypothyroidism)

Folate deficiency/ Fetus (pregnancy)



Triad of CKD(CRF) : 3P

Pallor (Anemia)

Pressure (HTN)

Proteinuria



Asthma attack Acute management : **O SHIT**

Oxygen

Salbutamol

Hydrocortisone

Ipratropium

Theophylline



RISHACADEMY

educate yourself to empower yourself

www.rishacademy.com

Suspect Stroke? Check this : **FAST**

Face

Arm

Speech

Time



RISHACADEMY

educate yourself to empower yourself

www.rishacademy.com

Morphine actions : **MORPHINE**

Miosis (pin point pupil)

Orthostatic Hypertension

Respiratory Depression

Physical dependancy

Histamine release

Increased ICP

Nausea

Euphoria

Sedation



Teratogenicity : adverse drug reactions during pregnancy : **AV PASS ACT**

All anti cancer drugs

Valproic acid

Phenytoin

Ace inhibitors

Sulfonamides

Sulfones

Amino glycosides

Cloramphenicol

Tetracyclin



Beta blockers members : **NEPAL PM**

Nadolol

Esmolol

Pindolol

Atenolol

Labetalol

Propranolol

Metoprolol



RISHACADEMY

educate yourself to empower yourself

www.rishacademy.com

Abdominal swelling causes : 9F

Fat

Feces

Fluid

Flatus

Fetus

Full sized tumor

Full bladder

Fibroids

False pregnancy



Contents of popliteal fossa : **S2P6**

Small saphenous vein

Sciatic nerve branches

Posterior division of obturator nerve

Posterior cutaneous nerve of thigh

Popliteal artery

Popliteal vein

Popliteal lymph nodes

Pad of fat



Elastic cartilages are in : **4E**

Epiglottis

Ear pinna

External acoustic meatus
lateral part

Eustachian tube medial part



RISHACADEMY

educate yourself to empower yourself

www.rishacademy.com

Treatment for myocardial infarction : **OSAMA BIN**

Oxygen

Statins

Aspirin

Morphine

Ace inhibitors

Beta blockers

IV heparin

Nitroglycerin



Parkinson management drugs : **SALAD**

Selegiline

Anticholinergics

Levodopa + Carbidopa

Amantadine

Dopamine receptor agonist
(Bromocriptine)



RISHACADEMY

educate yourself to empower yourself

www.rishacademy.com

Vagus nerve branches : **APE-SCRAP**

Auricular nerve

Pharyngeal nerve

Esophageal plexus

Superior laryngeal nerve (Gives internal 'sensory' and external 'motor' LN)

Cardiac branches

Recurrent laryngeal nerve

Anterior Vagal Trunk

Posterior Vagal Trunk



What we see in a Chest X-ray:

Airway(Trachea)

Bones of chest, **B**roncho vascular markings.

Cardiac Shadow

Diaphragm

Echogenicity of Lung fields,

Fundi **G**as,

Hilum of Lungs.



Clubbing causes

Cynotic heart disease

Lung abscess

Ulcerative colitis

Biliary atresia

Bronchogenic carcinoma

Infective cause SABA , TB

Nail trauma

Genetic



Clinical Features 4 Tension Pneumothorax : 5T

Tachypnea

Tachycardia

Tympanic note on percussion

Total absence of breath sounds

Tracheal shift



Nerves Supplying scalp : **GLASS**

Greater auricular nerve
/**G**reater occipital nerve

Lesser occipital nerve

Auriculotemporal nerve

Supra trochlear nerve

Supra orbital nerve



Macrocytic anemia: causes

Alcohol + liver disease

B12 deficiency

Compensatory reticulocytosis (blood loss and hemolysis)

Drug (cytotoxic and AZT)/ Dysplasia (marrow problems)

Endocrine (hypothyroidism)

Folate deficiency/ Fetus (pregnancy)



Veins without valve

Internal Jugular vein

Pulmonary vein

Superior vena cava

Sinuses of brain



Download More Medical Notes at

RISHACADEMY

educate yourself to empower yourself

www.rishacademy.com